



K A N S A S

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Viral Hemorrhagic Fevers Q&A

What are viral hemorrhagic fevers?

Viral hemorrhagic fevers (VHFs) refer to a group of illnesses that are caused by several distinct families of viruses. In general, the term “viral hemorrhagic fever” is used to describe a severe syndrome in which multiple organ systems in the body are affected. These symptoms are often accompanied by hemorrhage (bleeding); however, the bleeding is rarely life threatening. While some types of hemorrhagic fever viruses can cause relatively mild illnesses, many of these viruses cause severe, life-threatening disease. The Ebola virus is one example of VHF. Others include Hendra, Lassa, Marburg, Nipah, and Rift Valley fever viruses.

VHFs cannot survive outside of host organisms such as animals, arthropods or insects, and are generally restricted to the geographic area where their hosts reside. Humans are not natural hosts for VHFs, but some types of VHFs may be spread to humans, who then may infect each other.

How are hemorrhagic fever viruses spread?

The hemorrhagic fever viruses carried by some rodents are transmitted when humans have contact with urine, fecal matter, saliva, or other body excretions from infected rodents. Arthropods (such as ticks and mosquitoes) may spread viruses to humans by biting, or when a human crushes a tick. Arthropods can also transmit virus to animals, including livestock. Humans may then become infected when they care for or slaughter the animals.

Some viruses that cause hemorrhagic fever can spread from one person to another, once an initial person has become infected. Transmission of VHFs to humans can also occur indirectly, through contact with objects contaminated with infected body fluids. For example, contaminated syringes and needles have played an important role in spreading infection in outbreaks of Ebola hemorrhagic fever and Lassa fever.

What are the signs and symptoms of VHFs?

Specific signs and symptoms vary by the type of VHF, but initial signs and symptoms often include marked fever, fatigue, dizziness, muscle aches, loss of strength, and exhaustion. Patients with severe cases of VHF often show signs of bleeding under the skin, in internal organs, or from body orifices like the mouth, eyes, or ears. However, although they may bleed from many sites around the body, patients rarely die because of blood loss. Severely ill patients may also show shock, nervous system malfunction, coma, delirium, and seizures. Some types of VHF are associated with renal (kidney) failure.

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How are patients with viral hemorrhagic fevers treated?

Patients receive supportive therapy, but generally speaking, there is no other treatment or established cure for VHFs. Ribavirin, an anti-viral drug, has been effective in treating some individuals with Lassa fever or Hantavirus fever with renal syndrome (HFRS). Treatment with convalescent-phase plasma has been used with success in some patients with Argentine hemorrhagic fever.

How can VHF cases be prevented or controlled?

With the exception of yellow fever and Argentine hemorrhagic fever, for which vaccines have been developed, no vaccines exist that can protect against these diseases. Therefore, contact with host species must be avoided. Controlling rodent populations, discouraging rodents from entering occupied buildings, and safe clean up of rodent nests and droppings may serve to prevent the transmission of VHFs from rodents to humans. Similarly, people should make good use of insect repellants with DEET, proper clothing, window screens, and other insect barriers to avoid being bitten. When spending time outdoors, routine self-checks for ticks, along with prompt and careful tick removal are recommended.

Persons who become infected with VHFs should be placed in medical isolation and provided with supportive therapy. Strict infection control practices should be observed in providing medical care for these individuals.